

## **Women in Sports and Performance**

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### **ABSTRACT**

The females' participation in sports and performance is a great issue of discussion over the years in the world scenario as well in India. In the international arena women were first allowed to participate in the 1900 Paris Olympic Games *i.e.* in the second Modern Olympic only in the games of golf, sailing, croquet and tennis under the venture of Baron Pier de Coubertin, father of Modern Olympic henceforth the rate of participation of women has been increased in the international as well as national games and sports. Even in the present day Modern Olympic Games no restriction is made for their participation in sports competition only due consideration is given while assigning athlete events keeping in view anatomical and physiological differences in their physiques. While females have completed successfully in athletes for many years, the athletic arena has traditionally been the domain of the males. During the early 1970's, female athlete underwent a dramatic revolution demands were made for equality in budget, facilities, equipment, coaching, and competitive opportunities for a position in the world of athlete comparable to that enjoyed by the males. It is found that only 12 women were participated for the first time in the 1900 Olympics in Paris. But in Sydney in 2000 women participated in almost all events. However discussion will say that in sports females lag behind in performance than men. Hence here it has become matter of discussion that similarities and differences between males and females in those areas that directly influence athletic performances. The areas of primary concern will be the physique, body composition, strength, energy systems; cardiovascular endurance capacity, motor skill development and athletic ability, also there will be discussion on menstrual and gynaecological. From a comparative statement on world athletic records between males and females' performance ratio dividing women's performance by men's performance found that in 100 metre sprint result stands  $10.49/9.79$  seconds *i.e.* equals to 1.071. Similarly in high jump performance ratio stands  $2.45/2.09$  *i.e.* 1.172. Ratio stands in other events as follows in 200 metre sprint  $21.34/19.32$  *i.e.* 1.104 seconds. In 50 metre swimming  $24.13/21.64$  seconds *i.e.* 1.115 so on. However, in Discus throw ratio stands 76.80 metre divided by 74.08 metre *i.e.* 0.964 which is less than one meaning that men's performance is better than the women's. It is also to note that lower the performance ratio, the closer the performance of women to men. In case of discus throw women's performance is better. In other words it can be said that in track and field and in swimming men's performance is better than women. So question arises that do these performance differences results from biological differences between the sexes? Or do they reflect the social and cultural restrains that have been placed on the female child during her pre-adolescent or adolescent development period?

**Key Words :** Female athlete, Sports, Performance, Olympic Games

### **INTRODUCTION**

General saying is that female is the God's best gift to this beautiful world but as athlete female was first allowed to participate in the Olympic Games in 1900 Paris

Olympic Games. But in Sydney in 2000 women participated in almost all events. Now Females are doing better parallel with the men. Let's see the similarity and differences from different angles between male and female. Body build of both sexes at the full maturity the

average female is 3-5 inches shorter in height than the male. Females are 30-40 pounds lighter in total weight than the male. Females are 40-50 pounds lighter in lean body weight than the male. Females have 15-25 pounds more body fat than average male. In terms of body composition, a 19-22 years young female will average between 22-26 per cent of body fat, while the male of similar age will average between 12-16 per cent of body fat. These differences are due to both a lower absolute lean weight and higher absolute fat weight in the female. The higher levels of the androgen hormones in the male are undoubtedly responsible for his greater lean body weight. Similarly, the higher levels of estrogen hormones in the female are at least partially or her greater amount of fat weight. Furthermore, the mature female has higher amounts of essential fat due to the fat in breast and in other sex-specific tissues. In swimming, sex differences in body compositions tend to be advantageous to the female, whereas in running, the men have the advantage because, in water, the greater body fat of female leads to less energy expenditure per unit of distance swim. However, in running, the extra body fat of the female becomes a burden by virtue of the fact it increases the workload. The important point to note with regard to strength is that the strength differences vary among the different muscle groups, for instance, in comparison with males; females are weaker in the chest, arms, and shoulders and stronger in the legs. The Energy systems; cardiovascular endurance capacity, motor skill development, athletic ability, menstrual and gynaecological considerations in women also is the discussion matter in this study.

#### **Aim and objectives of the study:**

The main aim and objectives of the study is to discuss the females' participation in sports and performance with respect to the physique, body composition, strength, energy systems; cardiovascular endurance capacity, motor skill development, athletic ability, menstrual and gynaecological considerations with respect to their male counterpart.

### **METHODOLOGY**

Women managed to take part unofficially, in the second Olympics that were held in Paris in 1900. It is found that only 12 women were participated for the first time in the 1900 Olympics in Paris. They competed in tennis, croquet, sailing and golf. In London in 1908, there

were 36 women among a total of 2008 athletes, still unofficially. They competed in archery, skating, sailing, tennis and water motor sports. In the 1912 Olympics in Stockholm, women were allowed to compete in swimming. The Australian Fanni Durack won the 100 metre freestyle with a time that equaled that of the Athens 1896 male gold medalist. After the First World War, in Antwerp in 1920, women took part officially in the Olympics for the first time. In Amsterdam in 1928 they could compete in athletics competitions, and this increased their participation considerably. There were 290 women out of a total of 2,883 athletes. Between 1928 and 1936 (Berlin), there were women's competitions in the main Olympic disciplines. In the 1948 Olympics in London, the Dutch athlete Francina Elsje Blankers Koen made a name for herself by winning four Olympic medals in track and field events. She was a mother of two and earned the nickname the "Flying Housewife". Micheline Ostermeyer, a discus thrower, also attracted attention for her athletic prowess and great personality. In 1968 in Mexico, for the first time the final torch-bearer was a young woman, the athlete Norma Enriqueta Basilio de Sotelo. The participation of women continued to increase. In Seoul in South Korea the number exceeded two thousand. There were 2,194 women out of a total of 8,391 athletes. In Sydney in 2000, the Olympic flame was carried by women torch-bearers to commemorate the one hundred years of women's participation in the Games. In the London Games of 2012, women make up 45% of the athletes. Women's boxing has been introduced, a discipline that was previously reserved to men. On the other hand, there are two disciplines not open to men. They are synchronised swimming and rhythmic gymnastics. There are more male than female participants, and some disciplines have more competitions for men and consequently more medals are assigned to men than women. In Sydney Olympic 2000 women participated in almost all events. However discussion will say that in sports females lag behind in performance than men. This may cause of women's later participation in sports, social, cultural restrains as well as biological differences between the sexes.

### **RESULTS AND DISCUSSION**

From a comparative statement on world athletic records between males and females' performance calculating ratio dividing women's performance by men's performance found that in 100 metre sprint result stands

10.49/9.79 seconds *i.e.* equals to 1.071. Similarly in high jump performance ratio stands 2.45/2.09 *i.e.* 1.172. Ratio stands in other events as follows in 200 metre sprint 21.34/19.32 *i.e.* 1.104 seconds. In 50 metre swimming 24.13/21.64 seconds *i.e.* 1.115 so on. However, in Discus throw ratio stands 76.80 metre divided by 74.08 metre *i.e.* 0.964 which is less than 01 meaning that men's performance is better than the women's. It is also to note that lower the performance ratio, the closer the performance of women to men. In case of discus throw women's performance is better. In other words it can be said that in track and field and in swimming men's performance is better than women. Now Question arises that do these performance differences of male and female athletes results from biological differences between the sexes? Or do they reflect the social and cultural restrains that have been placed on the female child during her pre-adolescent or adolescent development period? From different research works found that females have almost the same concentration of muscular ATP-PC as men such as in 100 metre running. Women are inclined to have lower levels of lactic acid in their blood following intense level of exercise than men mainly for the female's lesser muscle mass. The maximal aerobic power ( $VO_2\text{max}$ ) of the female is lower than that of the male for body size factors including less haemoglobin and blood volume and a smaller heart volume. The absolute strength of the female is only about two third that of the male, yet the quality of muscle fibers, so far as the ability to exert force is concerned is not effected by sex. Mild exercise does not appear to have a significant effect on menstrual disorders. However, heavy intensive training has been found to induce amenorrhea (cessation of menstruation) in some athletes, particularly long distance runners, gymnasts and swimmers. Majority of the young female athletes, performance is not affected materially by the menstruation period. Serious injuries either to breasts or external and internal reproductive organs are rare in females even in contact sports. Complications of pregnancy and childbirth are fewer in female athletes than in non-athletes. Nonetheless the Olympics provide us with a singular opportunity to observe the fastest woman marathon runner is still twelve minutes behind the fastest man. There is always more than a second between men and women in the 100 metres, and more than a metre in the long jump. Is it really sure that differences should be removed and that the result would be favourable to women, to men, or to relations between

them? Other experts hope that sport too will recognise the specific nature of the female organic structure so that excellence will be seen in disciplines that do not depend on strength or muscular power, but on resistance, flexibility and agility. Sports medicine shows how the lower muscular mass of women and their lower number of red cells in the blood limit the peak of strength they can reach, but it gives them greater breadth of movement and less consumption of oxygen for the same effort. We can understand this idea by observing the differences between men's and women's competitions in disciplines like gymnastics and diving. On the other hand, there are sports where the sex of the athlete is irrelevant. Equestrians sports are an example, and in these men and women take part in the same competitions.

### Conclusion:

It can be concluded that

1. Women were first allowed to participate in the mega event Olympic Games in 1900.
2. In running, women's sprint performance is closest to men's, whereas in swimming, it is closest in the distance events.
3. Females have almost the same concentration of muscular ATP-PC as men.
4. Women are inclined to have lower levels of lactic acid in their blood following intense level of exercise than men mainly for the female's lesser muscle mass.
5. The maximal aerobic power ( $VO_2\text{max}$ ) of the female is lower than that of the male for body size factors including less haemoglobin and blood volume and a smaller heart volume.
6. The absolute strength of the female is only about two third that of the male, yet the quality of muscle fibers, so far as the ability to exert force is concerned is not effected by sex.
7. Mild exercise does not appear to have a significant effect on menstrual disorders. However, heavy intensive training has been found to induce amenorrhea (cessation of menstruation) in some athletes, particularly long distance runners, gymnasts and swimmers.
8. Majority of the young female athletes, performance is not affected materially by the menstruation period.
9. Serious injuries either to breasts or external and internal reproductive organs are rare in females even in contact sports.
10. Complications of pregnancy and childbirth are

fewer in female athletes than in non-athletes.

11. Furthermore, pregnancy does not adversely affect participation and performance in sports and games. Following a child birth, performance returns or even exceeds previous levels within year/two.

12. Women enter most contests with the handicaps of more fat, less muscle, and a lower oxygen transport than male competitors. They are average 3-5 inches shorter than their male counterparts.

13. From various issues related with female athletes indicates number of differences and similarities with male athletes, but basically these are same as of male athletes, which suggests that there is a little reason to advocate different training or conditioning programme on the basis of sex.

14. Experts say sports can be chosen where the sex of the athlete is irrelevant to have an equal chance to compete.

15. Equestrians sports are an example, and in these men and women take part in the same competitions.

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